Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
IP-Enabled Services	)	WC Docket 04-36
	)	

To: The Commission

COMMENTS OF THE KING COUNTY E911 PROGRAM

I. Introduction

The following comments are provided in response to the Commission's *Notice of Proposed Rulemaking* ("*NPRM*") in the above-captioned proceeding regarding Voice over Internet Protocol ("VoIP) and other Internet Protocol-Enabled ("IP-enabled") services, FCC 04-28, released March 10, 2004.

King County is the largest county in Washington State with a population of 1.7 million people. The county includes the large urban city of Seattle, as well as suburban, rural, and mountainous areas. Enhanced 911 service is provided to the public through 14 Public Safety Answering Points (PSAPs). Of the 1.75 million 911 calls answered at the PSAPs in 2003, 54% of the calls were made from wireline phones, and 46% were made from wireless phones. The percentage of wireless 911 calls continues to increase each year. King County has implemented Phase I and Phase II wireless E911 service with all seven of the wireless carriers who offer service within the county.

Currently, there are six known VoIP providers offering service within King County. Some of these companies contacted the E911 Program Office prior to offering service to discuss 911 service, and some did not. Some of the VoIP providers are

offering service only to businesses, and interface to the E911 system through PBX 911 interface services at the local exchange carrier, which allows for selective routing, and the provision of call-back number and location information to the PSAPs. Other VoIP providers offer service to residential customers, and are currently forwarding 911 calls to unverified ten-digit telephone numbers that they obtained from sources other than King County. It is unknown what the volume of VoIP 911 calls is. The PSAPs are gravely concerned about the impact these calls will have on their call takers, and about their ability to provide emergency services to these callers in the absence of any call-back or location information.

II. King County Responses to NPRM Questions

A. Categorizing IP-Enabled Services

Paragraph 35

King County supports regulation of VoIP services for the provision of E911 service to VoIP users. The service provider of any device that functions like a telephone and has the ability to connect to the Public Switched Telephone Network (PSTN) to deliver voice calls should be required to provide E911 service to their customers. The public expectation is that any device that can make voice phone calls can call 911. In addition, the public expectation is that full E911 service will be available on all telephone devices, including selective routing to the appropriate PSAP, and the provision of their call-back number and location information to the PSAP. Our experience with wireless 911 service was that as soon as the capability to call 911 from a wireless phone was implemented, the public assumed that this 911 service worked just like E911 service for their home telephone, and that the PSAPs received their call-back number and location.

We were largely unsuccessful in our attempts to educate the public that they did not have access to full E911 services, but only the capability of dialing the digits.

In our experience in dealing with the wireless carriers, we began working with them for the provision of 911 service in Washington State in the late 1980s. Prior to the FCC's 94-102 ruling, our efforts to move forward with the wireless carriers were met with resistance and very little progress was made. Only after the Commission began to regulate the provision of wireless E911 service were we able to gain momentum and move forward with the implementation of this service. We are concerned that there will be serious delays in the nationwide implementation of E911 service for VoIP unless there is regulation that requires the VoIP providers to deliver this service. For this reason, we encourage the Commission to separate E911 service from other VoIP issues and deal with this issue on a priority basis.

Paragraph 36

The regulation of E911 service for VoIP would clearly be designed to protect public safety. One economic factor which must be considered is the funding of E911 service for VoIP. E911 systems throughout the country are funded by state-specified dedicated funding mechanisms, typically through an excise tax or surcharge on telecommunications service that is restricted to fund E911 service. Currently, states are prohibited from assessing 911 taxes on VoIP. This seriously jeopardizes the future of E911 systems. At the present time, in order to establish a path for VoIP 911 calls to reach the PSAPs at the same priority level as other 911 calls, King County is in the process of adding network components to the E911 system specifically for VoIP calls. This additional network will be funded by the existing 911 excise taxes on wireline and

wireless phones, because there is no funding mechanism for VoIP phones. The PSAPs will need to add staff to answer the VoIP calls, due to the additional staff time anticipated to handle these calls due to their complexity and the lack of any call-back or location information. There is no funding source to pay for the increased staffing. In monitoring the work being done by the National Emergency Number Association (NENA) and others to develop technical solutions for VoIP E911 service, it is apparent that significant changes or additions will need to be made to the existing E911 systems to incorporate the provision of service to VoIP. Again, there is no funding source to cover these extensive costs. In order to move forward to provide VoIP E911 service, it will be necessary for wireline and wireless customers to pay to support E911 service for VoIP subscribers, while VoIP users will not contribute any funds. This inequity of funding existed for many years as wireline customers supported the provision of E911 service to wireless subscribers, until the establishment of a dedicated 911 tax on wireless phones was successful. States must be allowed to collect funds from VoIP subscribers in order to correct this funding injustice.

In addition, VoIP service is predicted to replace traditional wireline telecommunications service. As this occurs, E911 funds generated by the 911 taxes on wirelines will be eroded. So not only will there be no funding mechanism to support the implementation of VoIP E911 service and the impact these calls will have on the PSAPs, this service will also diminish the funds generated by the existing wireline 911 taxes. This situation must be corrected quickly before the E911 systems suffer irreparable harm and E911 service throughout the nation is degraded. For this reason, King County fervently requests that the Commission allow states to establish funding mechanisms for

VoIP E911 service consistent with existing funding mechanisms for wireline and wireless E911 service.

The key element to distinguish services that will be viewed by the public as replacements for traditional voice telephony should be the ability of a device to connect with the PSTN for the delivery of a voice call. If a device can make telephone calls outside the VoIP provider's internal network, including 911 calls, it should be regulated as a telecommunications service to ensure that public safety issues are addressed.

Paragraph 37

VoIP voice service that connects to the PSTN is absolutely functionally equivalent to traditional wireline telephony in the eyes of the public. Related to E911 service, as stated earlier, any device that functions like a telephone and has the ability to connect to the PSTN to deliver voice calls should be required to provide E911 service to its customers. The public expectation is that any device that can make voice phone calls can call 911. The telecommunications industry predicts that VoIP telephony will replace traditional wireline telephony within a few years. This voice component of IP services must be regulated to require the provision of E911 service. If this does not occur, as the public replaces their wireline phones with VoIP phones, E911 service will become non-existent. The public expectation is that the governments will take whatever action is necessary to ensure the continued availability of this critical service. The ability of a device to interconnect with the PSTN to deliver voice calls to traditional telephone numbers is a clear divider between VoIP services that should be regulated to require E911 service and those that are not.

B. Appropriate Legal and Regulatory Framework

Paragraph 42

The Commission has set a precedent of regulating the provision of E911 service for telecommunications services. The most recent example is the requirements for Phase I and Phase II wireless E911 service. It is completely appropriate for the Commission to treat VoIP E911 service in a consistent manner, and establish requirements for E911 service for VoIP.

Paragraph 43

Any device that has the ability to interconnect to the PSTN for the delivery of voice calls should be classified as a telecommunications service. In the eyes of the pubic, all of these technologies perform the functionally equivalent task of enabling voice communications between two parties, and consistent standards for E911 service should be required for all.

Paragraph 47

King County would argue that requiring the provision of E911 service is necessary to protect consumers. The public has come to rely on this service for quick, easy access to emergency services, and it is critical that this service continue to be available nationwide for any telecommunications device that can place voice calls on the PSTN. The public's expectation is that this service will continue to be available in the future.

Paragraph 48

Given our extensive history of attempting to move forward with E911 service with the wireless carriers prior to Commission regulation, it is our experience that voluntary compliance with E911 requirements and standards is very difficult to achieve.

The only way to ensure the consistent implementation of E911 service for VoIP is to establish rules that define the service and require the VoIP providers to deliver the service.

Paragraph 53

King County strongly supports the requirement of E911 service as opposed to basic 911 service. Given the complexity of our emergency services structure, it is critical that VoIP 911 calls can be selectively routed to the appropriate PSAP. Selective routing is one of the components of E911 service. This element is so critical that the implementation of a 911 system in King County was not practical until E911 service with selective routing became available in the mid-1980s. In addition, with the wide deployment of E911 service for both wireline and wireless across the country, the public has come to expect that their 911 calls will be routed to the appropriate local PSAP. The selective routing of VoIP 911 calls is technically feasible. Some level of routing is already being done by Intrado, a company who provides E911 database services, on behalf of VoIP providers. New methods of routing are also being tested as part of the development process of E911 service for VoIP. King County is currently involved in one of these tests.

It is our experience that regulation of E911 service actually speeds up the development of the service. Again referencing our experience with wireless E911 service, the implementation of this service was delayed because of lack of agreement of what constituted the service. Once the Commission released 94-102, development of the service accelerated as companies now had a definition of the service to guide their technical development.

While IP services definitely have the potential to offer advantages to the PSAPs and to the E911 networks in the future, the current experience is that this new technology is having a significant detrimental staff impact on the PSAPs. These calls are currently not routed with the same precision as wireline calls. The result is that after determining the location of the caller, there is a high likelihood that the call taker will have to transfer the call to another PSAP. If the caller is located in another local jurisdiction or even in the same state, transfer mechanisms have been put in place to facilitate this process. However, there have also been examples of VoIP 911 calls that have been routed to PSAPs several states away from the caller. The PSAPs currently do not have the necessary information or transfer mechanisms to allow them to correctly transfer these calls.

Paragraph 54

VoIP 911 calls currently do not provide any subscriber, call-back, or location information to the PSAPs. The lack of this information seriously delays the handling of the 911 call, and in cases where the caller is unable to provide their location, it is not possible for the PSAP to send help. Subscriber information, call-back telephone number, location, service provider, and an indication of whether the call has been made from a static port or through wireless access are critical pieces of information that the PSAPs need in order to provide effective service to the 911 caller. This information will allow them to locate the caller to send help, call them back if the call is disconnected, and contact the appropriate service provider if problems occur or if additional assistance is needed in order to help the caller. Some of this information is already being transmitted on 911 calls today by VoIP providers, but the information is not yet being delivered to

the PSAPs. This demonstrates that accomplishing this function is technically feasible. Once again, with the widespread deployment of wireline and wireless E911 service, the public expectation is that their information, including location, will be sent to the PSAP along with their voice call.

It is not acceptable to allow the transmission of 911 calls to PSAPs without providing the PSAPs with the tools they need to provide emergency services to the caller. This has occurred each time a new technology is developed, and this has a serious impact on the PSAPs. Their staff is a limited resource, and delivering calls to them with no information ties them up so they are not available to answer other 911 calls, and frustrates them when they are not able to provide assistance to a call for help.

Minimal technical requirements are necessary for the provision of VoIP E911 service. The definition of E911 service must be clear so the VoIP providers can develop the service to meet required guidelines, and so the PSAPs know what service they can expect to receive. Even with minimal regulations on wireless E911 service, our experience has been that a wide variance of service is delivered to the PSAPs. Rather than having one level of service called Phase II, we have seven different flavors of Phase II. It is necessary for the PSAPs to track which carrier the call came from, so they can assess the accuracy of the location provided, whether the call was delivered as Phase I and they need to rebid for Phase II, whether they need to wait a certain number of seconds to rebid for an updated location or can rebid immediately, and whether there a loss of audio capability to communicate with the caller while the location technology determines the caller location. Even with Commission regulation, Phase II is having a significant impact on the PSAPs. The specification of the technical requirements for

VoIP E911 service will assist in defining the service that is delivered to the PSAPs, so they can better prepare to receive and utilize the information that is provided to them with the 911 calls.

Paragraph 55

VoIP service definitely meets the four criteria identified in the E911 Scope Order, as has been discussed in previous paragraphs. It is totally appropriate to apply these same criteria to VoIP services when considering E911 regulation.

Paragraph 56

King County supports the extension of E911 requirements to VoIP service. Voluntary agreements between parties do provide some benefit, but our experience has been that the negotiations are very difficult and lengthy. In fact, the NENA/VON Coalition agreement has caused great controversy in Washington State. The PSAPs are so gravely concerned about the delivery of VoIP 911 calls to them without the necessary tools provided by E911 service that they have considered that VoIP devices should not be allowed to make 911 calls until those features are available. The establishment of the NENA/VON agreement and the public announcement of this agreement has set the public expectation that VoIP 911 calls will be delivered to ten-digit numbers at the PSAPs, and has given the PSAPs no choice but to accept these calls even though they do not have the funding, staffing, or technology to provide effective service to these callers. Certainly, important work among the parties involved will enhance the development of E911 service for VoIP, and the recommended, voluntary standards developed by NENA play a critical role in the provision of E911 service. It is most beneficial when this voluntary work is conducted within the framework of service requirements defined by the

Commission, so that all parties are motivated to work towards effective solutions as quickly as possible.

Paragraph 57

King County requests that the Commission separate E911 service from other VoIP issues and deal with this issue on a priority basis as quickly as possible. There are already multiple VoIP providers offering service in King County, and we are aware of many more who plan to offer service in the near future. Customers who subscribe to this service may or may not know about the limitations of 911 service. They may be making the move to change telecommunications providers under the false assumption that they have equal access to E911 services, which jeopardizes their safety. This public expectation of service makes it totally appropriate for the Commission to impose E911 requirements on VoIP services that interconnect with the PSTN. The fact that this service is developing so quickly, with numerous providers already delivering service to the public without E911 capabilities, makes it critical for the Commission to act quickly in imposing E911 requirements.

In addition, delivering these calls to PSAPs without selective routing based on location, and without call-back number and caller location, has a significant impact on the time it takes the PSAP to handle the 911 call. PSAPs must be provided with the tools necessary to effectively provide emergency service to VoIP 911 callers as soon as possible, and we encourage the Commission to escalate the priority of requiring E911 service for VoIP to facilitate the implementation of this service to the public.

Regarding the concern that E911 requirements should be delayed until VoIP services are better established, our concern is exactly the opposite. With the development

of wireless E911 service delayed until after wireless service was widely deployed, we have lived with years of retrofitting the systems to provide E911 capabilities, and of the PSAPs struggling to provide service to wireless 911 callers without the necessary information to do so. We are concerned that delaying the establishment of E911 requirements for VoIP will re-create the wireless situation that we are still working to resolve.

III. Conclusion

We would like to thank the Commission for your continued support of E911 service. Your work in this area has resulted in great strides being taken in Washington State and throughout the nation on the deployment of E911 service for wireline and wireless phone users. We respectfully encourage the Commission to consider taking action to ensure that E911 service is available to VoIP customers as well. The establishing of E911 requirements and enabling states to enact funding mechanisms to pay for this critical service will greatly enhance the implementation of VoIP E911 service for the public.

Respectfully submitted,

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